

REMARKS/ARGUMENTS

This case has been reviewed and analyzed in view of the Official Action dated 21 September 2004. Responsive to the rejections made by the Examiner in the outstanding Official Action, Claim 1 has been amended, Claims 2-3 have been canceled, Claim 11 has been amended, Claims 14-18 have been canceled, and Claims 19-20 have been inserted in order to more clearly clarify the inventive concept of the Applicant.

It is respectfully noted that the Office Action mailed on 21 September 2004 includes typographical errors with regard to both the Application Serial Number and the Attorney Docket Number. The undersigned Attorney, in a telephone conversation with the Examiner, confirmed that this Office Action is actually directed to Application Serial No. 10/691,493 and Attorney Docket Number MR3003-62. It is requested that all communication in the future with regard to this case include the correct Serial Number and Attorney Docket Number.

The Examiner has objected to the Drawings under 37 C.F.R. § 1.83(a) for not showing every feature of the invention specified in the Claims. The Examiner has stated that the lamp wick (Claim 15) is not shown in the Drawings as originally filed. However, it is respectfully noted that Fig. 3 of the Drawings does include lamp wick 48. The Examiner has further objected to the “other gas burners” (Claim 17) and the “other liquid burners” (Claim 18). Claims 17 and 18 have now been canceled from this case.

The Examiner has further objected to the Abstract of the Disclosure as being longer than 150 words. The Abstract has now been amended in order to overcome the Examiner's objection.

The Examiner has additionally objected to the Specification for failing to provide proper antecedent basis for the "lamp wick", "other gas burners", and "other liquid burners". Claims 17 and 18 have now been canceled from this case, and it is respectfully noted that the lamp wick 48 of Claim 15 is described on Page 5 of the Application, as originally filed, on Lines 37-38 and Page 6, Lines 2-5. Further, the lamp wick 48 is listed in the "list of reference symbols" on Page 7 of the Application as originally filed.

The Examiner has further objected to informalities in Claims 15 and 16, however, Claims 15 and 16 have now been canceled from this case.

The Examiner has rejected Claims 11, 17, and 18 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. Claim 11 has now been amended to overcome the Examiner's specific rejection, and Claims 17 and 18 have been canceled from this case.

Prior to a discussion of the Examiner's further rejections made in the outstanding Official Action, it is believed that it may be beneficial to briefly review the subject Patent Application in light of the inventive concept of the Applicant. The subject Patent Application is directed to a liquid fuel oil transformation device. The device includes a

fuel oil conversion cylinder having a fuel oil filling port used for adding fuel oil, along with a constant-temperature means and a fanning means used for feeding air into the fuel oil conversion cylinder. A base is connected to one end of the vapor transportation pipe and is provided with a coupling portion for coupling to an oil vapor combustion device, which may be an oil vapor lamp. The fanning device is connected to a fanning pipe for delivering air to the bottom of the fuel oil conversion cylinder and releasing the air into the fuel oil body. A check valve is provided between the fanning means and the fanning pipe for the prevention of an adverse flow of air, fuel air, and oil vapor.

It is respectfully noted that the Examiner has stated that Claims 3, 5, 6, 9, 15, and 16 were merely objected as being dependent upon a rejected base Claim, but would be allowable if rewritten in Independent form including all of the limitations of the base Claim and any intervening Claims. Further, the Examiner stated that Claims 11, 12, and 18 would be allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, second paragraph. Claims 2 and 3 have now been canceled from this case, and the elements of Claims 2 and 3 have been incorporated into Independent Claim 1. Further, Claims 14-18 have now been canceled from this case, and the elements of Claims 14 and 15 have now been incorporated into newly-inserted Independent Claim 19. The elements of Claim 16 have been incorporated into newly-inserted Dependent Claim 20, dependent upon Independent Claim 19. It is now believed that the Application has been placed in condition for allowance, and such action is respectfully requested.

The Examiner has rejected Claims 1, 4, 10, 13, and 17 under 35 U.S.C. § 103(a) as being unpatentable over Matsumoto JP 56-59103. It is the Examiner's contention that it would have been obvious to modify the shape of the tank of Matsumoto to become a cylinder.

As shown in the Matsumoto Drawings, oil B flows through an oil supply pipe 14 and is heated and vaporized within vaporizing section 20. The vaporized gas is ejected from a nozzle 30 into mixing section 40. The fuel gas in the mixing section 40 is mixed with combustion air supplied from air ports 7 and then carried through an upper and lower slit assembly 41a, b, respectively, into an upper and lower combustion section assembly 50a, b for combustion therein.

The Matsumoto reference, however, does not teach or suggest the use of a check valve provided between a fanning means and the fanning pipe in order to prevent an adverse flow of air, fuel air, or oil vapor. The system of the subject Patent Application, however, includes a check valve positioned between the fanning means and the fanning pipe in order to prevent the adverse flow of either air, fuel air, or oil vapor. Such a valve is necessary for the proper operation of the liquid fuel oil transformation device, in that convection currents of either air, fuel air, or oil vapor can be detrimental to the proper burning and transformation of the oil within the system.

Further, the Matsumoto reference does not teach or suggest a specific structure for the oil vapor lamp including a coupling body, a vapor duct, a lamp wick, or a lampshade

provided on the coupling body for encircling the vapor duct and the lamp wick in order to provide windproofing and protection of the lamp wick.

The system of the subject Patent Application, however, provides for a coupling body for coupling to the coupling portion of the base and a vapor duct provided on the coupling body for directing the oil vapor. Further, a lamp wick is covered at one end of the vapor duct for illuminating when the oil vapor is ignited thereat, and a lampshade is provided on the coupling body for encircling both the vapor duct and the lamp wick in order to provide windproofing and protection of the wick.

Thus, the Matsumoto reference does not provide for: "...a check valve provided between said fanning means and said fanning pipe for the prevention of an adverse flow of air, fuel air, and oil vapor...", as is clearly provided by newly-amended Independent Claim 1. Further, the Matsumoto reference does not provide for: "...a coupling body for coupling to said coupling portion of said base; a vapor duct provided on said coupling body for directing oil vapor; a lamp wick covered at one end of said vapor duct for illuminating when oil vapor is ignited thereat; and, a lampshade provided on said coupling body, presented as an encirclement mode for said vapor duct and said lamp wick in order to provide windproofing and lamp wick protection...", as is clearly provided by newly-inserted Independent Claim 19.

Thus, it is not believed that the subject Patent Application is made obvious by the Matsumoto reference when Independent Claims 1 and 19 are carefully reviewed.

Additionally, the Examiner has rejected Claim 7 under 35 U.S.C. § 103(a) as being unpatentable over the Matsumoto reference as applied to Claim 4 above, and further in view of the Kun-Ming Patent #4,106,914. It is the Examiner's contention that it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the device of Matsumoto with the switch taught by Kun-Ming for the purpose of stopping the fanning means if the pressure in the tank increases.

The Kun-Ming reference has been cited by the Examiner merely because it teaches a switch, however, the Kun-Ming reference does not teach or suggest the use of a check valve. As described above, the Matsumoto reference does not provide, or suggest, the use of a check valve positioned between the fanning means and the fanning pipe.

As described above with regard to Claim 1, such a check valve is necessary for the prevention of an adverse flow of air, fuel air, or oil vapor. The system of the subject Patent Application includes a check valve provided between the fanning means and the fanning pipe for preventing such an adverse flow of air, fuel air, or oil vapor.

Neither the Matsumoto reference nor the Kun-Ming reference teach or suggest the use of such a check valve, when taken alone or in combination.

Further, neither the Matsumoto reference, or the Kun-Ming reference, as described above with regard to Claim 1, teach or suggest a particular structure of the oil vapor lamp including the coupling body, a vapor duct, a lamp wick, and a lampshade provided on the coupling body for providing both windproofing and protection of the lamp wick.

Thus, neither the Matsumoto reference nor the Kun-Ming reference, when taken alone or in combination, provide for: "...a check valve provided between said fanning means and said fanning pipe for the prevention of an adverse flow of air, fuel air, and oil vapor...", as is clearly provided by newly-amended Independent Claim 1. Further, neither the Matsumoto reference nor the Kun-Ming reference does not provide for: "...a coupling body for coupling to said coupling portion of said base; a vapor duct provided on said coupling body for directing oil vapor; a lamp wick covered at one end of said vapor duct for illuminating when oil vapor is ignited thereat; and, a lampshade provided on said coupling body, presented as an encirclement mode for said vapor duct and said lamp wick in order to provide windproofing and lamp wick protection...", as is clearly provided by newly-inserted Independent Claim 19.

Thus, it is not believed that the subject Application is made obvious by either the Matsumoto reference or the Kun-Ming reference, when taken alone or in combination, when Independent Claims 1 and 19 are carefully reviewed.

The Examiner has additionally rejected Claim 8 as being unpatentable over the Matsumoto reference as applied to Claim 4 above, and further in view of the Kunze Patent #5,370,829. It is the Examiner's contention that it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the device of Matsumoto with a battery as taught by Kunze for the purpose of powering the fan motor.

The Examiner has cited the Kunze reference merely because it teaches a battery, however, neither the Kunze reference nor the Matsumoto reference, as described above with regard to Independent Claim 1, teach a check valve provided between the fanning means and the fanning pipe for preventing an adverse flow of air, fuel air, and oil vapor.

As described above with regard to Independent Claim 1, the system of the subject Patent Application includes such a check valve which is necessary for preventing an adverse flow of air, fuel air, or oil vapor, for providing efficient and continuous operation of the liquid fuel oil transformation device.

Further, as described above with regard to Independent Claim 19, neither the Matsumoto reference nor the Kunze reference teach a specific structure for the oil vapor lamp including a coupling body, a vapor duct, a lamp wick, or a lampshade provided on the coupling body for providing windproofing and protection of the wick. The system of the subject Patent Application, however, does include such a combination of elements. Neither the Matsumoto reference nor the Kunze reference, when taken alone or in combination, teach or suggest such a combination of elements, which provides for an efficient and continuously operating fuel oil transformation device with additional protection from the elements.

Thus, neither the Matsumoto reference nor the Kunze reference, when taken alone or in combination, provide for: "...a check valve provided between said fanning means and said fanning pipe for the prevention of an adverse flow of air, fuel air, and oil

vapor...”, as is clearly provided by newly-amended Independent Claim 1. Further, the Matsumoto reference, nor the Kunze reference, does not provide for: “...a coupling body for coupling to said coupling portion of said base; a vapor duct provided on said coupling body for directing oil vapor; a lamp wick covered at one end of said vapor duct for illuminating when oil vapor is ignited thereat; and, a lampshade provided on said coupling body, presented as an encirclement mode for said vapor duct and said lamp wick in order to provide windproofing and lamp wick protection...”, as is clearly provided by newly-inserted Independent Claim 19.

Thus, it is not believed that the subject Patent Application is made obvious by the either the Matsumoto reference or the Kunze reference, when taken alone or in combination, when Independent Claims 1 and 19 are carefully reviewed.

The Examiner has additionally rejected Claims 1, 2, 4, 7, 10, 13, 14, and 17 under 35 U.S.C. § 103(a) as being unpatentable over the Barbarin Patent #82,273 in view of the Kun-Ming reference. It is the Examiner’s contention that it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the vaporization tank of Barbarin with a constant temperature means and fanning means as taught by Kun-Ming for the purpose of facilitating vaporization of the liquid fuel by providing heat and compressed air.

The Barbarin reference is directed to a vapor burner. As shown in the Figures, a carburetor A is enclosed within an air-tight cover, and includes a pipe B for the entrance

of a hydrocarbon liquid. Pipe D is provided for the discharge of the carbureted air. A carbureted-air pipe D extends up from the top of the vessel and carries one or more burners. The Barbarin reference does not include a fanning means.

Although the Kun-Ming reference does teach a tanning means, neither the Barbarin reference, nor the Kun-Ming reference, when taken alone or in combination, teach or suggest the use of a check valve provided between a fanning means and the fanning pipe in order to prevent an adverse flow of air, fuel air, or oil vapor. The system of the subject Patent Application, however, includes such a check valve, allowing for the prevention of the adverse flow of air, fuel air, or oil vapor, and providing for efficient and continuous operation of the liquid fuel oil transformation device.

Additionally, neither the Barbarin reference nor the Kun-Ming reference, when taken alone or in combination, provide for the combination of elements of an oil vapor lamp including a coupling body, a vapor duct, a lamp wick, and a lampshade provided on the coupling body for providing windproofing and protection of the lamp wick.

The system of the subject Patent Application, however, does include an oil vapor lamp having a coupling body, a vapor duct, a lamp wick, and a lampshade provided for windproofing of the lamp wick and protection of the lamp wick (and vapor duct), in order to provide efficient and continuous operation of the fuel oil transformation device.

Thus, neither the Barbarin reference nor the Kun-Ming reference, when taken alone or in combination, provide for: "...a check valve provided between said fanning

means and said fanning pipe for the prevention of an adverse flow of air, fuel air, and oil vapor...”, as is clearly provided by newly-amended Independent Claim 1. Further, the Barbarin reference, nor the Kun-Ming reference, does not provide for: “...a coupling body for coupling to said coupling portion of said base; a vapor duct provided on said coupling body for directing oil vapor; a lamp wick covered at one end of said vapor duct for illuminating when oil vapor is ignited thereat; and, a lampshade provided on said coupling body, presented as an encirclement mode for said vapor duct and said lamp wick in order to provide windproofing and lamp wick protection...”, as is clearly provided by newly-inserted Independent Claim 19.

Thus, it is not believed that the subject Application is made obvious by either the Barbarin reference or the Kun-Ming reference, when taken alone or in combination, when Independent Claims 1 and 19 are carefully reviewed.

It is now believed that the remaining Claims 4-13, and 20 show patentable distinction over the prior art cited by the Examiner for at least the same reasons as those previously discussed for Independent Claims 1 and 19.

The remaining references cited by the Examiner, but not used in the rejection, have been reviewed, but are believed to be further removed when patentable distinctions are taken into account than those cited by the Examiner in the rejection.

MR3003-62

Application Serial No. 10/691,493

Responsive to Office Action dated 21 September 2004

It is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectfully requested.

Respectfully submitted,



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